

LISTING OF THE CLAIMS

1. (Currently amended) A system for providing access to an array of guide pages from an interactive program guide within constraints imposed by limited bandwidth available in a distribution network, the system comprising:

a distribution control center coupled to the distribution network;

a session manager ~~in the distribution control center for monitoring and controlling~~ configured to monitor and control usage of demand-cast stream bandwidth within the distribution network; and

a transport stream generator configured to:

~~including a processor and a multiplexer, the transport stream generator for receiving~~

receive demand-cast guide page usage information from the session manager, for using said information to

determine, based on the received information, an unaccessed demand-cast guide page of a transport stream, the transport stream comprising multiple demand-cast streams containing corresponding demand-cast guide pages, wherein the demand-cast guide pages were generated as video sequences,

determine a replacement demand-cast guide page of the array of guide pages to replace the unaccessed demand-cast page by substituting a demand-cast stream of the unaccessed demand-cast page with a demand-cast stream of the replacement demand-cast page, wherein the demand-cast stream of the replacement demand-cast page is multiplexed into the transport stream, and

transmit the transport stream toward a plurality of terminals via the distribution network for delivering toward at least one of the plurality of terminals a requested demand-cast guide page requested by the at least one terminal

~~if there is a demand cast guide page currently in a demand cast stream that is not currently being accessed and controlling which demand-~~

~~cast guide pages of said array of guide pages are inserted into the demand-cast stream to replace the demand-cast-guide page not currently being accessed, which are then multiplexed into a transport stream, and for generating the multiplexed transport stream for transmission to a plurality of terminals via the distribution network to deliver a requested demand-cast-guide page to a terminal requesting said requested demand-cast-guide page.~~

2. (Original) The system of claim 1, wherein the plurality of terminals are coupled to a node within the distribution network, and said transport stream is transmitted from the transport stream generator to said node.

3. (Original) The system of claim 1, wherein the session manager receives demand-cast stream acquisition, release, and request messages from the plurality of terminals.

4. (Original) The system of claim 3, wherein said acquisition, release, and request messages are transmitted via out-of-band communications.

5. (Previously presented) The system of claim 1, wherein the transport stream includes a list of available demand-cast streams, and said list is used by a terminal in determining whether a demand-cast stream has a particular demand-cast guide page of said array of guide pages that may be acquired immediately or needs to be requested.

6. (Original) The system of claim 5, wherein an acquisition message is sent from the terminal to the session manager if the stream is acquired, and a request message is sent from the terminal to the session manager if the stream needs to be requested.

7. (Original) The system of claim 6, wherein a release message is sent from the terminal to the session manager once the terminal is no longer acquiring the stream.

8. (Original) The system of claim 1, wherein the session manager tracks demand-cast streams that are acquired by at least one terminal by maintaining a dynamic list of terminals that are presently acquiring each demand-cast stream.

9. (Original) The system of claim 8, wherein the session manager informs the transport stream generator when a terminal request a demand-cast stream which is not present in the transport stream.

10. (Original) The system of claim 9, wherein the session manager informs the transport stream generator when there is no longer any terminals acquiring the demand-cast stream.

11. (Original) The system of claim 1, wherein the distribution control center comprises a cable headend.

12. (Original) The system of claim 1, wherein the transport stream generator is co-located with the session manager at the distribution control center.

13. (Original) The system of claim 1, wherein the transport stream generator is located separately from the session manager.

14. (Currently amended) The system of claim 1, wherein the session manager comprises:

a monitoring module for receiving acquisition, release, and request messages from [[a]] the plurality of terminals;

a tracking module for maintaining a dynamic list of terminals that are presently acquiring each demand-cast stream; and

a controlling module for informing the transport stream generator when a terminal requests a demand-cast stream which is not present in the transport stream and for informing the transport stream generator when there is no longer any terminals acquiring the demand-cast stream.

15. (Currently amended) The system of claim 1, wherein the transport stream generator comprises:

an interface to a session manager for receiving the demand-cast guide page usage information from the session manager;

a multiplexer for multiplexing demand-cast streams into the transport stream for transmission to the plurality of terminals via the distribution network; and

a controller for controlling which demand-cast streams are multiplexed into the transport stream using the demand-cast guide page usage information.

16. (Withdrawn) A method of requesting an interactive program guide (IPG) by a set-top terminal (STT) from provider equipment comprising a session manager and a transport stream generator as a content distribution control center, comprising:

sending, from said transport stream generator, a demand-cast index table to said STT;

receiving, at said session manager, a communication associated with a demand-cast stream of an IPG page from said STT, said communication comprising one of an acquisition, release, and request for said demand-cast IPG page available from said demand-cast index table by said STT; and

receiving, at said transport stream generator, a communication from said session manager indicating subject matter of said communication from said STT to said session manager.

17. (Withdrawn) The method of claim 16, wherein said sending, from said transport stream generator, a demand-cast index table to said STT, comprises:

transferring said demand-cast index table said STT via an IPG MPEG transport stream.

18. (Withdrawn) The method of claim 16, wherein said sending, from said transport stream generator, a demand-cast index table to said STT comprises:

providing, in said demand-cast index table, a table version number, a list of available demand-cast streams associated with said IPG, a source address associated with said transport stream generator, a MUX channel number, and temporal information associated with said IPG page.

19. (Withdrawn) The method of claim 16, wherein said receiving, at said session manager, a communication associated with a demand-cast IPG page from said STT further comprises:

sending, in said communication associated with a demand-cast IPG page, demand-cast stream identification, identification of said STT, source address of said transport stream generator, and a MUX channel number within said transport stream generator.

20. (Withdrawn) The method of claim 19, wherein said receiving, at said transport stream generator, a communication from said session manager comprises:

receiving said demand-cast stream identification, said MUX channel number, and whether said demand-cast stream has is released or requested by said STT.

21. (Withdrawn) The method of claim 16, further comprising:

receiving, at said session manager, an acknowledgement from said transport stream generator indicating one of a release and a request for said demand-cast stream by said STT.

22. (Withdrawn) The method of claim 21, wherein said receiving, at said session manager, an acknowledgement from said transport stream generator, further comprises:

identifying from said acknowledgement, an ID of said demand-cast stream, a MUX channel number, and an address of said transport stream generator.

23. (Withdrawn) The method of claim 20, further comprising:

maintaining demand-cast stream status at said transport stream generator, said status including active streams currently being multiplexed into a transport stream to said SST, and inactive streams not being multiplexed into the transport stream to said SST,

24. (Withdrawn) The method of claim 23, wherein said maintaining demand-cast stream status at said transport stream generator comprises:

assigning active demand-cast streams as one of:

acquired demand-cast streams that are being multiplexed and used by at least one STT and are referenced in the demand-cast table of a IPG transport stream being sent to said at least one STT; and

released demand-cast streams that are being multiplexed, and unused by at least one STT, said released demand-cast streams not being referenced in the demand-cast table of a IPG transport stream being sent to said at least one STT.

25. (Withdrawn) The method of claim 24, wherein said released demand-cast streams comprise passive demand-cast streams, said passive demand-cast streams designating aged demand-cast streams being in an inactive state.

26. (Withdrawn) The method of claim 25, wherein said maintaining demand-cast stream status at said transport stream generator further comprises:

assigning inactive demand-cast streams as demand-cast streams not being multiplexed or used by at least one STT, and not referenced in said demand-cast index table.

27. (New) The system of claim 1, wherein the transport stream generator determines the replacement demand-cast guide page upon receiving a request message from the session manager.